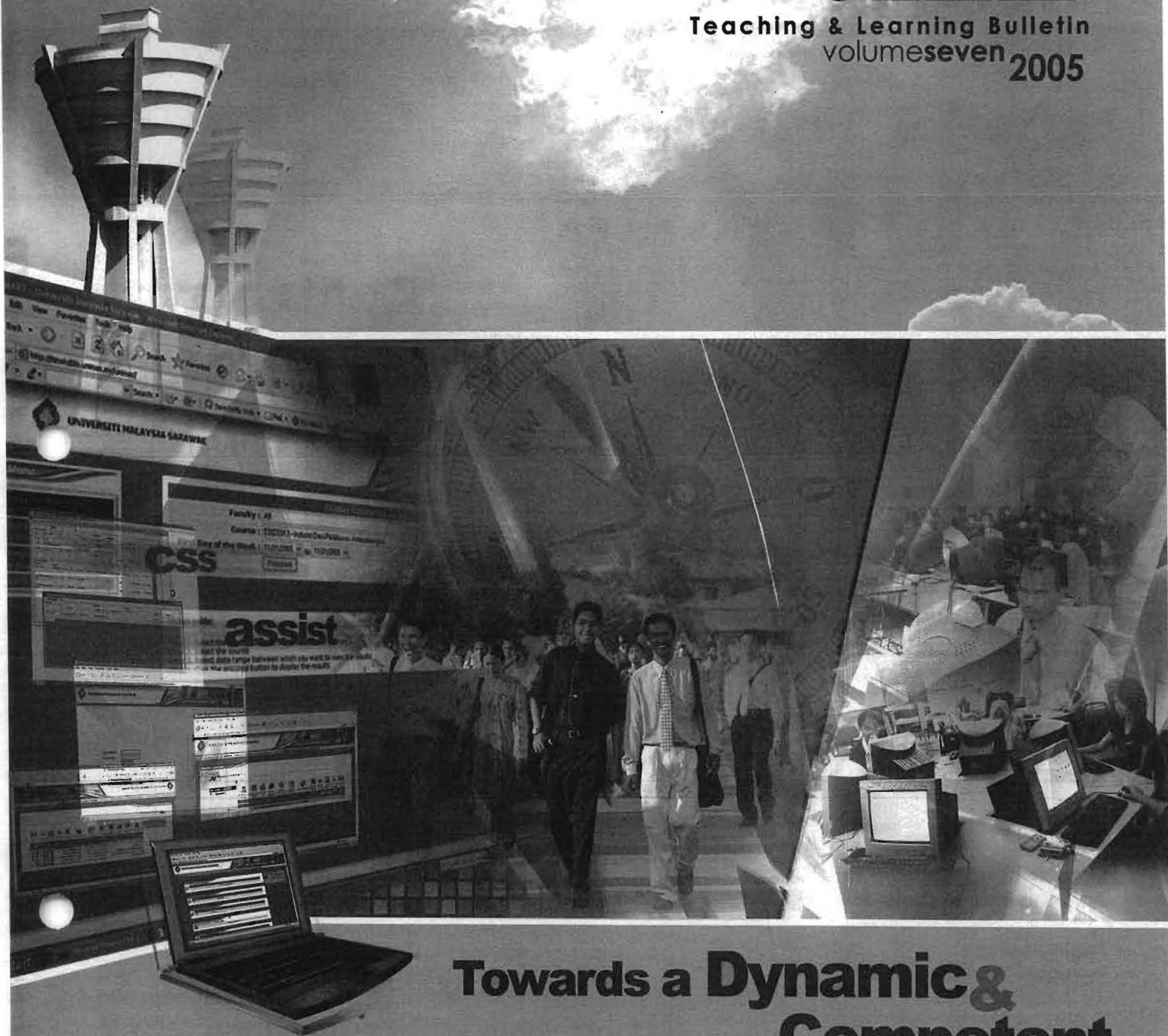


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Towards a Dynamic & Competent Teaching & Learning Environment

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Rozita bt. Nawi

Graphic Designer

Angeline R. Lee Ling Sing

Photographer

Bujang bin Mohammad

Centre for Applied Learning and Multimedia,
Universiti Malaysia Sarawak,
94300 Kota Samarahan,
Sarawak.

Tel : 082 671 000

Fax : 082 671 579

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warm greetings from CALM


The theme of this issue of Insight is **"Towards a Dynamic and Competent Teaching and Learning Environment."** We chose this theme to remind ourselves that teaching and learning process could be interesting and motivating if both lecturers and students could help nurture a creative, innovative and friendly environment where they can interact dynamically and effectively with each other.

In using the word *dynamic*, we are implying that lecturers and students are actively involved in the teaching and learning activities which will result in meaningful and valuable learning experiences. It is believed that for students to achieve this, they have to be immersed in an environment that offers opportunities for action and reflection. As knowledge and the quest for it is dynamic, changing and constructed within a social context, both lecturers and students should be able to adapt to new realities and methods of the teaching and learning process. Simply having the knowledge of the lecturers' specialized discipline does not represent competency in their teaching and learning endeavors. It is their ability to impart that knowledge effectively in a way that the students can make meaning out of what they have learned so that they can productively apply them to solve problems that they encounter in their lives. Thus, the application of the correct pedagogy in the lessons is particularly fundamental towards a dynamic and competent teaching and learning environment.

In this issue, some lecturers have willingly shared their ideas and thoughts regarding the theme. Please check out the article, *"How are Great Teachers Remembered: Eleven Attributes that Matter Most"* by Dr Ong Puay Hoon. She shares her experience in facilitating Cohort 3 of the Postgraduate Diploma in Teaching and Learning. Based on that experience, she has listed 11 characteristics which can be practiced by lecturers to become competent and effective educators. Incidentally, the article on the Postgraduate Diploma in Teaching and Learning Program, *"Developing a Competent Academic Community through a Professional Development Program: the Postgraduate Diploma in Teaching and Learning"* is worth reading especially by those

who are yet to attend the program, because it gives insight about it.

Last but not least, I would like to take this opportunity to congratulate the participants of the Postgraduate Diploma in Teaching and Learning who have successfully completed the program and have received their diplomas at the 2nd Convocation on 19th November 2005. I would also like to thank all those who have contributed articles to this issue of Insight for their continued support, and I hope that this spirit of sharing will be sustained towards the advancement of teaching and learning in UNIMAS.



Prof Peter Songan
Dean, CALM



How are Great Teachers Remembered: Eleven Attributes that Matter Most



text • inspiration

Dr. Ong Puay Hoon | phong@fmhs.unimas.my

The class of 34 participants in the Postgraduate Diploma in Teaching and Learning Cohort 3 was divided into six groups. These participants are lecturers who are newly appointed or who had just returned from their postgraduate studies. Each member of the group was required to reflect to his/her days in school - be it primary or secondary school, or university and recalled a teacher/lecturer most liked. The characteristics of this teacher were to be written down on a paper in point form. After this individual reflection, the group discussed and selected those characteristics that were common in each member's list. These characteristics were then presented to the whole class.

What then are the characteristics that were constantly presented by each group regarding their favourite teachers? What attributes were remembered and well-liked?

* The term 'teacher' is employed to denote anyone who has a formal responsibility to teach and train others.

1) Knowledge of subject: Teacher, know thyself. Socrates said the most important thing in life is to know yourself. Teachers must know what they are teaching about and have mastery over the content. Having this mastery allows the teacher to be flexible in managing the content.

"If you dare to teach, you must never cease to learn." - Harry Wong (2004), Master Teacher in US.

2) Knowing how to teach: Knowing

what to teach does not guarantee knowing how to teach it. My Mathematics professors in the university were good examples of content experts who could not teach. They have so much stuff in their heads that they were eager to impart and I could still recall how facts and pieces of information just flew out of their mouths onto the board without any structure. For the whole hour, we saw only their backsides as they scribbled all over the board, mumbling and talking to it! Needless to say, we learned more from the Schaum's series than from them.

Knowing how to teach calls for knowledge of how students learn. Shulman (1986) talked about pedagogical content competency as knowing how to teach what one is good at. Knowledge and application of theories of learning and behaviour modification will definitely help in raising the effectiveness of the teaching-learning processes. The effective teacher demonstrates a deep understanding of both content and pedagogy.

3) Knowing students as individuals:

Good teachers know each student by their names, and the unique characteristics of each - their abilities, talents, skills, knowledge, experiences and background.

Students' names have been specially chosen by their parents or grandparents and often times, by religious elders, to reflect some noble values, heritage or a role-model. Some of these names have been

chosen even before the child is born. Yet, in many school classrooms, we hear teachers exhort, "Class, please read page 42," "Class, keep quiet, please" and "Class, look here". The 30-odd or 40-odd unique names disappeared into one amorphous "Class". Some teachers do even greater damage by replacing a unique name by "Fat one, please do this question on the board" or "Monkey at the back of the class, please sit down!" Worst damage is inflicted when teachers extort in front of the class, "Your answer is wrong, Stupid!"

Sun Tzu, in his classical and epic 'The Art of War' (512 BC) aptly reminded teachers to:

"Know your enemy (students), know yourself and your victory will not be threatened. Know the terrain (learning environment), know the weather (learning theories and tools) and your victory will be complete."

4) Passion for teaching: Good teachers have a passion for teaching. This passion is manifested in the untiring and vibrant ways they employ to bring the best out of their students. They usually have an incredible talent to transfer their enthusiasm and energy to the students. These teachers are committed, responsible and often go beyond the call of formal responsibilities. A wonderful example of one teacher's passion that ignited each and every one of his students for change and excellence is that of Mr. Ned Dewey of the movie 'School of Rock'. His passionate desire to

achieve his goals, albeit initially selfish ones, created wonderful rapport - an invisible bond between himself and the students - which allowed him to enter the students' world and caused them to feel that he understood and cared for them. Successful teachers possess this great talent for creative rapport that can release an invisible "phantom force" that cause their students to remember them and want to be around them.

"Rapport is the ultimate tool for producing results with people" - Anthony Robbins (1986), a best-selling author.

5) Good class management:

Although students seem to want to have fun in the class, they actually prefer teachers who institute order. Students want teachers who know when to call for order, attention and serious work, and when to allow students' free expression. Stability through good class management and routine is an absolute necessity that allows students to feel safe and secure. The effective teacher is committed to the development of self-control and autonomy among the students.

6) Creative and interactive: Knowing how to teach calls for ability to adapt and change in the face of advancing knowledge. Mahatma Gandhi's words, "We must become the change we want to see" still ring true today as educators need to become more adept at accepting and adapting to changes. Students prefer teachers who have a vast array of teaching strategies that are adaptable according to content, learning profiles and availability of learning resources.

The effective teacher is someone who can take an idea or technique, even if it is not related to education, and transform it into something that will apply to a personal situation. The effective teacher is a creative teacher-one who can THINK, REFLECT and IMPLEMENT. This teacher designs and implements coherent instruction that meets the needs of all students.

7) Care and Concern: Good teachers demonstrate a sense of compassion and commitment to

help children. They are always willing to support and coach. They see their duty as a calling.

Good teachers recognise and celebrate differences among the students and at the same time, highlight their many commonalities. They treat each individual in the class as equally important. These teachers are aware of the dangers of self-fulfilling prophecy and refrain from making judgements about students' capabilities and potential.

The effective teacher is a creative teacher -one who can THINK, REFLECT and IMPLEMENT

"(Students) don't care how much you know until they know how much you care - about them" - Zig Ziglar (1991), motivational speaker.

8) Sense of Humour: Good teachers know when and how to evoke feelings of amusement among their students, which makes them laugh or feel happy. Good teachers know the importance of the affective environment and how humour can contribute to a positive environment for learning.

For some teachers, using humour is something to be feared as it is synonymous with classroom disorder and chaos. "I'm not about to start telling jokes, it will mean complete loss of control." Others associate humour and its use with non-productivity. "Students can't be learning if they are laughing".

Studies (eg: Loomax & Moosavi, 1998) suggest that the use of humour in the classroom reduces tension, improves classroom climate, increases enjoyment, increases student-teacher rapport and even facilitates learning.

Humour is able to connect students to the teacher and sometimes, to the learning material. This 'connectivity' is amply demonstrated in the film "Patch Adams."

"Indeed, the presumed health benefits of laughter may be coincidental consequences of its primary goal: bringing people together." Kristmanson, P. (2000).

One reason for using humour is that as a human trait it is a self-effacing behavior (Provine, 2000). It can allow the shy or timid student/undergraduate in your class to participate with the group. If it is used properly, humour allows the student to feel a part of the class and possibly contribute without losing face, feeling exposed or vulnerable.

"Classrooms in which laughter is welcomed help bring learning to life." Dickinson, D. (2001).

9) Appearance and personality: Harvey Mackay (1996), motivational speaker, once said,

"Appearance .. is always what sets you apart from the flock". Teachers who reflect positive mind-set and personality exude self-confidence and a sense of high esteem that can elicit confidence among their students. Students usually feel comfortable in the midst of such teachers. On the other hand, teachers who have poor appearance and moody personality elicit a threatening and intimidating atmosphere in the class that results in anxiety and vulnerability among the students.

10) Giving positive reinforcement: Students want teachers who nourish their egos and self-image through positive affirmations and praise and show appreciation for their works or answers.

Rich DeVos (2000), Chairman and co-founder of Amway Corporation says, *"One of the greatest things you can give to another person is the Gift of Encouragement. It is a gift with starting power, and staying power."*

Successful teachers know how to use their mouths as a tool and a powerful source of hope and encouragement to free students who are trapped by poor images and negative circumstances.

"People act like the person they

conceive themselves to be." - Maxwell Matz (1960), a best-selling author.

"Once a person's self-image improves, you will see significant gains in achievement." - Denis Waitley (1992), renowned speaker and motivator.

Anthony Robbins (1986) says, "You can only get people to change their behaviour if you talk their language."

11) Sense of professionalism:

Students like teachers who are punctual, reliable and trustworthy. These teachers believe in the dignity of the profession. The effective teacher assumes responsibility for the learning and behaviour of her students, and does not blame the school/university, the parents, the principal/dean, or last year's teacher. The effective teacher knows (s)he has the power to effect change-now!

The effective teacher fulfils all professional responsibilities to students, to parents and colleagues, to administrators, institution and community, besides making significant and regular contributions to the profession.

The above eleven characteristics have often been quoted in literature to reflect effective teachers. The 34 participants in the postgraduate diploma course have had role-models of good and effective teachers during their school and university days. They have rightly recognized what it takes to be good and effective teachers. By actualising these experiences and knowledge, they are on the way to become competent and dynamic lecturers in UNIMAS!

There are teachers who complained that their students were lazy, unresponsive and worse, stupid. Zig Ziglar (1987) has this to say to them, "If you don't like the output, then change the input". Changing and improving oneself to reflect as many of the above attributes as possible will, in all probability, improve the state of affairs in our classrooms or lecture rooms.

In parting, I would like to take this opportunity to share with you the

wise words of Kahlil Gibran (1883-1931), a Lebanese-American novelist and mystical poet, in *The Prophet* (1923).

Then said a teacher, "Speak to us of **Teaching**." And he said:

No man can reveal to you aught but that which already lies half asleep in the dawning of our knowledge.

The teacher who walks in the shadow of the temple, among his followers, gives not of his wisdom but rather of his faith and his lovingness.

If he is indeed wise he does not bid you enter the house of wisdom, but rather leads you to the threshold of your own mind.

The astronomer may speak to you of his understanding of space, but he cannot give you his understanding. The musician may sing to you of the rhythm which is in all space, but he cannot give you the ear which arrests the rhythm nor the voice that echoes it. And he who is versed in the science of numbers can tell of the regions of weight and measure, but he cannot conduct you thither.

For the vision of one man lends not its wings to another man. And even as

each one of you stands alone in God's knowledge, so must each one of you be alone in his knowledge of God and in his understanding of the earth.

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Teacher vs Scholar



text • inspiration

Jamayah bt. Sailli

sjamayah@fcs.unimas.my

I began teaching formally approximately three years ago. Prior to that, I was a temporary teacher and a teaching assistant. I consider the formal teaching platform to have begun when I was appointed a so called "lecturer" in May 2002. With three years of experience, I consider myself just a teacher but not a scholar yet.

I am a teacher who teaches counseling. I do not have a license yet, although I have registered with the Board of Counselors. Although I am a teacher, I am still learning myself. I believe that learning is a continuous process. For this reason, I should give myself time for learning to occur and to become a scholar in my field. This also applies to what I teach in class for students need time to reflect and apply what they have learnt. Their success will become part of my satisfaction and at the same time an indicator of me being a good teacher.

Table : Distributions of lecturers' perception on the importance of knowledge of subject matter to teaching

No	Items	Not Important	Very Important
1.	Effective lecturers must first be experts in their own subject areas	3.9	51.3
2.	Effective lecturers must be knowledgeable in related areas	1.3	57.9
3.	Effective lecturers must use concrete examples, to explain concepts, principles , etc	-	67.1
4.	Effective lecturers must be able to explain subject matter clearly and concisely	-	69.1
5.	Effective lecturers must be able to answer questions when asked by students	2.6	43.4
6.	Effective lecturers must make materials meaningful	-	59.2
7.	Effective lecturers must be able to show the link between various topics taught	-	67.1
8.	Effective lecturers must be well informed in related areas	1.3	46.1
9.	Effective lecturers must provide useful materials as reference to a topic	-	47.4
10.	Effective lecturers must teach all topics covered in the course outline	-	25.0

Being a good teacher doesn't guarantee a person of being a good scholar or vice-versa. In my line of practice, I can be a good counselor (scholar) and a good teacher of counseling. God's willing and also with experience I can become both --- teacher and scholar.

A final year project of an HRD student has caught my attention as it dealt with "the importance of knowing the subject matter to teaching"¹. When I first read it, I immediately asked myself if I am capable of giving concrete examples, clear explanations, or logical links among various topics to my students. I wish I could answer that without saying to myself, "I am still not good enough". The Table above is self-explanatory. Basically, it shows that knowledge of subject matter has a significant link with the lecturers' perceptions of effective teaching. It also further emphasizes the need for lecturers to be knowledgeable in the subject matter to produce quality students. Finally, it is important for an institution of higher learning like Unimas to continue to improve and enhance the quality of teaching of its lecturers.

¹Tan, S. S. (2003). Lecturers' perspective of effective teaching: A case study at Unimas. Unpublished Final Year Project, Faculty of Cognitive Science and Human Development, Universiti Malaysia Sarawak.

Plagiarism Detection System for Teaching and Learning



text • inspiration

Azni Haslizan Ab. Halim ahazni@fit.unimas.my

When the work of someone else is reproduced without acknowledging the source, this is known as plagiarism. The most frequent cases appear in higher institutions where students copy material from books, journals, the web pages, their peers etc. without citing references. Although sometimes intentional, there are some cases where students actually plagiarise unintentionally simply because they are not aware of how sources should be used within their own work.

When identifying plagiarism in student's assignment, the lecturers can look to the pointers that might suggest some of their work is not original. According to Culwin and Lancaster, the lecturers can check for unusual references cited in their papers. Many outdated references, or references that are not available locally suggest that the paper may not be freshly written. Another technique is dramatic changes in level of writing ability. The students may not write those well-written section or changes in tense or voice can also be suspicious. Also some analogies with non-local or non-current events need to consider this issues as plagiarism. Identifying these methods of cheating are normally done by lecturers or tutors manually. If they are familiar with the writing style of the students, they may be able to identify irregularities. However, it may be time consuming and require thorough checking over their assignments. As a result, we have developed an electronic tool called Plagiarism Detection System (PDS) to help lecturers to detect plagiarism in student's assignment.

PDS is developed based on a Four-Stage Plagiarism Detection Model proposed by Culwin and Lancaster from South Bank University. It provides an in-depth discussion of the issues that a hire institution needs to be aware of. As shown in Figure 1 above, it includes the potential for incorporating automated plagiarism detection to find close similarity within a set of student assignment and also from outside resources, such as, copying from a book or the web pages.

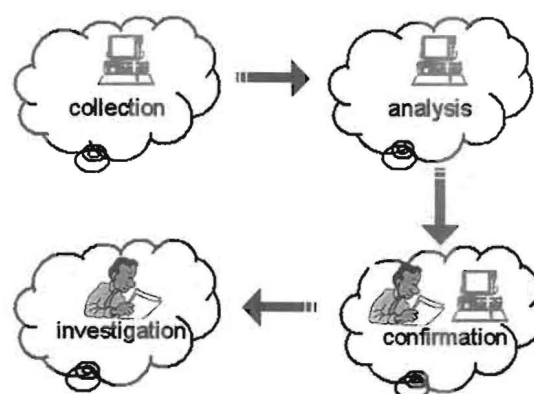


Figure 1: Four-Stage Plagiarism Detection Model

The Four-Stage Plagiarism Detection Model consists of collection, analysis, confirmation and investigation stages. The first stage of the process is collection of student assignments in softcopy and machine-readable format such as text file. Since higher institution requires work to be word-processed, it is safe to assume that electronic copies exist somewhere. It is followed by the analysis phase, where the submissions are compared with two or more papers, with documents obtained from the web pages and the reference list of those assignments to find similarity. Once similarity is detected without proper citation of the resources, the assignment requires verification or confirmation stage. This involves the decisions to determine whether or not plagiarism has taken place. Those assignments are now subjected to investigation, where at this point electronic tools have to show the evidence of plagiarism. This stage also involves the process of deciding guiltiness and possible penalties as determined by the University's rules and regulations.

PDS uses a combination of keyword extraction and sentences alignment methods (see Figure 2). These methods are based on two levels of detection: sentence and word. It is done at two levels because this will increase the chances of detecting similarity and allow a thorough checking to be performed

on the documents. At the sentence level, sentence alignment is used to detect the similarity between two documents. It will align sentences in the student assignment to sentences in the web pages referenced by students. On the other hand, at the word level, similarity is detected using the keyword comparison method. In the keyword comparison, words in the student assignments are compared to words in the web pages. Then, identical words are identified and eliminated from the student's assignment.

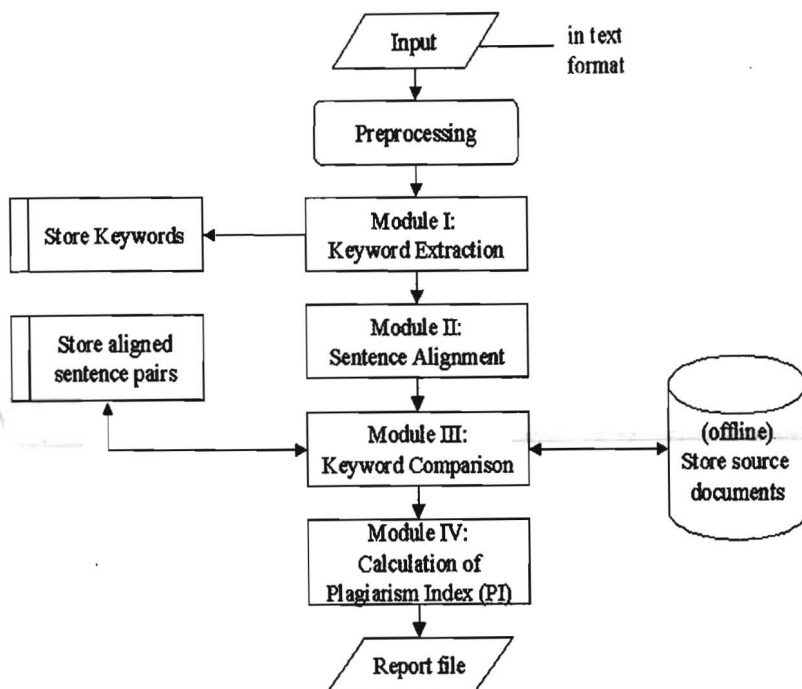


Figure 2: Flowchart of Plagiarism Detection System

A measurement of similarity is given to the student assignments. This measurement is called the Plagiarism Index (PI). PI indicates the number of matching between student's assignment and web pages, scaled by joint set size. Let $S(A)$ and $S(B)$ be a set of word list from student assignments and web pages, respectively. Let $R(A,B)$ be the resemblance between A and B.

$$R = \frac{|S(A) \cap S(B)|}{|S(A) \cup S(B)|}$$

Documents are plagiarized if after preprocessing, $R=1.0$. The category very closely takes $1.0 > R \geq 0.8$, while significant plagiarism takes $0.8 > R \geq 0.2$.

Electronic detection tools such as PDS is a potentially useful tool for addressing plagiarism problems in teaching and learning. The tool deals with plagiarism more appropriately. Furthermore, identifying plagiarism will be faster. Although PDS benefited lecturers to detect plagiarism faster, teaching students to avoid plagiarism is also very important. Many students do not know how to cite properly. This tool helps reduce cases of plagiarism among students. Using this tools plagiarism will be minimised and students will produce original and quality works. Thus, academic integrity will be upheld and protected.



text • Inspiration

Prof. Peter Songan
Assoc. Prof. Gabriel Tonga
Fitri Suraya Mohamad
Julia Lee Ai Cheng

songan@calm.unimas.my
gtnoweg@calm.unimas.my
mfritri@fcs.unimas.my
aclee@calm.unimas.my

Developing a Competent Academic Community through a Professional Development Program: The Postgraduate Diploma in Teaching and Learning

Introduction

When a university is founded, one of its first few crucial tasks is to build its teaching faculty that will spearhead the academic goals of the institution. In December 1992, Universiti Malaysia Sarawak (UNIMAS) was established in Sarawak. UNIMAS is the eighth public university in the country, and it was formed on the core principles of Malaysia's strategic Vision 2020, which calls for effective alignment of education with the current demands for a globalized market. In line with Vision 2020, the vision of UNIMAS:

"is to become an exemplary university of internationally acknowledged stature and a scholarly institution of choice for both students and academics through the pursuit of excellence in teaching, research and scholarship."

A public university in Malaysia is generically geared towards three core businesses, namely teaching-learning, research, and consultancy and community services. Being a young university in the country and the first one in the state of Sarawak, UNIMAS has had to hire young graduates to put together eight faculties at the time it opened its doors to the first intake of students in 1993. The more experienced faculty members are lecturers who have taught elsewhere in Malaysia, mostly with more than five years of teaching experience at university level.

As the academic community at the university grew, and as the student population increased each year, the university realized how much the quality of teaching-learning needed to be effectively addressed, in terms of training and recognition. The university acknowledged the necessity to put in place a mechanism to train lecturers the basics of teaching, to ensure effective learning and the achievement of learning outcomes, as part of the contribution to a quality education at the university. It is also hoped that, with the current fresh interest in upgrading the skills of teaching among

lecturers, the academic community will collectively be more inclined toward improving the delivery of learning and skills in their courses.

After a decade of existence, the university introduced a special training program-the Postgraduate Diploma in Teaching and Learning as a strategy to fulfill its mission to achieve excellence in teaching, research, and scholarship. As one of the youngest universities in the country, UNIMAS is now at a crucial stage of seriously considering developing a culture to enhance the scholarship of teaching and learning to provide quality education.

The Program: Postgraduate Diploma in Teaching and Learning

One of Malaysia's blueprints on education is to increase the student intake by 26 percent and to be a center for quality education by the year 2020 (Geoffrey, 1996). As a developing nation pressured to enhance our competitive edge in education, business, and industry, quality assurance of teaching and learning in higher education is an important factor to ensure that the universities meet up to the standards of its customers, namely, the individuals, organizations, industries, government, and the society at large (Ghazali Ismail & Murtedza Mohamed, 1996). As an institution of higher learning, UNIMAS is subjected to be accountable to all its clients.

Although teaching and learning is one of the core businesses in any university, it is widely known that, unlike school teachers, university academics are not normally trained to teach. Yet, because teaching is one of the core businesses of a university, it must align its mission with the objective of developing quality human resource (Zawawi Ismail, 1996).

As a forward-looking university, UNIMAS is eager to embark on a university-wide endeavor on training its academics for excellence in teaching and learning. One of the systematic ways to achieve this goal is to

offer a Postgraduate Diploma in Teaching and Learning for all new and untrained academics. This program should be considered as one of the major efforts initiated in the development of the academics, which is often ranked among the most popular in developing departments, faculties, and institutions (Badley, 1999).

Rationale for the Program

There are currently eight faculties in UNIMAS that conduct taught courses. Currently, there are 480 academics in all these faculties, and out of this population, approximately 60 percent of them are new and untrained academics, who have no formal training in teaching, hence, they lack the skills and experience in this area. Therefore, UNIMAS is no different from other universities, since many of its academics also lack the formal training in teaching (Kogan, Moses, El-Khawas, 1994). As such, the Postgraduate Diploma in Teaching and Learning is one of the major efforts undertaken by the university to enhance the knowledge and skills of these fresh and new academics in the area of pedagogy and in the use of technology.

Objectives of the Program

The objectives of the Postgraduate Diploma in Teaching and Learning program are to:

- i. train UNIMAS academics in teaching and learning on a systematic and formal basis to enhance their personal competence as university educators;
- ii. establish a long term commitment toward teaching and learning that is consistent with UNIMAS teaching and learning policies; and
- iii. develop a culture of collaborative academic environment that places special commitment to excellence in teaching and learning.

Curriculum of the Program

The curriculum for the postgraduate program is a combination of coursework and practicum. There are seven modules in this intensive study program, namely:

- > Module 1: Introduction to University Teaching
- > Module 2: Principles of Teaching and Learning
- > Module 3: Instructional Design

- > Module 4: Management of Teaching and Learning
- > Module 5: Assessment of Learning
- > Module 6: Educational Technology
- > Module 7: Teaching Practice

Each of the seven modules is assigned 3 credits, contributing to a total of 21 credits for the whole program.

The contents of each module are as follows (Universiti Malaysia Sarawak, 2003):

Module 1

CLM 5013: Introduction to University Teaching (3 credits)

This module introduces the UNIMAS vision and mission, and some core conceptual ideas underlying university teaching. The major concepts which are the focus of this module are a framework of teaching-learning process, concept of university education, understanding university students, and university teaching as a profession. The professional characteristics of university educators, competencies of university teachers, good teaching practices, and the development of a personal philosophy of teaching are also discussed.

Module 2

CLM 5023: Principles of Teaching and Learning (3 credits)

The underlying psychological concepts and phenomena in teaching and learning are covered in this module. These include the investigation of the mechanisms and principles in behavioral changes, knowledge acquisition, learning processes and other structures in the mind that are related to learning. The discussions include behaviorist theory, principles of learning, memory and retention, role of information processing system, and higher order thinking covering language processing, understanding, categorization, knowledge representation, decision-making, problem solving and creativity. Various learning styles and teaching strategies are also discussed in this module.

Module 3

CLM 5033: Instructional Design (3 credits)

This module introduces instructional design as a systematic development of instructional specifications using learning and instructional theories

to improve learning through quality instruction. The module comprises the entire process of analysis of learning needs; develop clear and concise learning goals and the development of the delivery system to meet those needs. It includes development of instructional materials, activities, information resources, implementation and evaluation of these instructions and learner activities. The assumptions underlying instructional design, such as behaviorism, cognitive theories, developmental theories, and instructional theories are also discussed.

Module 4

CLM 5043: Management of Teaching and Learning (3 credits)

This module discusses the various methods and approaches of managing teaching and learning activities in order to enhance their effectiveness. Some of the major methods and approaches covered in this module are developing course portfolio, supervising students, motivating students, classroom management, and evaluation of teaching. Making choices about changes and implementing and assessing changes are also discussed.

Module 5

CLM 5053: Assessment of Learning (3 credits)

Assessment and feedback are crucial in helping learners learn. The aim of this module is to facilitate understanding of the importance of assessment, feedback, as well as the types of assessments that can be deployed to "test" students' learning. The characteristics of good assessment, which include validity and reliability, are discussed. The formats of assessment and the purposes of each form of assessment are also discussed. Practical suggestions for writing objective questions and case studies, and preparation of rubrics for quizzes, essays, portfolios, demonstrations, presentations, performances, exhibitions and case studies are also covered.

Module 6

CLM 5063: Educational Technology (3 credits)

This module is designed to introduce to the students the field of educational technology; its

concepts, types and functions in education and training, especially in institution of higher learning. The module covers the process of utilization, supervision, management and evaluation of educational technology. Included in the discussions are the infusion of some of the latest technologies in the classroom, such as interactive multimedia, the Internet and video conferencing. Emphasis is given to the process of producing and evaluating educational technology materials using multimedia and the Internet.

Module 7 CLM 5073: Teaching Practice (3 credits)

This module exposes educators to practice what they have learned from the other modules in an actual classroom environment. The rationale is that educators learn from their own practice. Educators will plan their lesson, implement and evaluate the lesson using the principles they have learned from the other modules. They will also practice how to manage the classroom environment and motivate learners based on the strategies and approaches that they have learned from the previous modules.

Graduation Requirements

The participants should meet the following minimum requirements for graduation with a Postgraduate Diploma in Teaching and Learning recognized internally by UNIMAS:

- i. a satisfactory attendance record. Participants are required to attend all supervised learning activities;
- ii. a Cumulative Grade Point Average (CGPA) of not less than 2.5; and
- iii. a successful completion of teaching practice.

Management of the Program

A Board of Studies (BOS) is established to plan and monitor the academic curriculum, course delivery and quality assurance of the program. The BOS is chaired by the Deputy Vice Chancellor (Academic and Internationalization), and the members comprise the management team at the Centre for Applied Learning and Multimedia and selected senior lecturers from all faculties of UNIMAS.

The study program adheres strictly to and meets all the requirements the UNIMAS Postgraduate Study Rules and Regulations in which quality assurance elements are intrinsically instituted.

Highly qualified and experienced teaching staff who are sourced from within UNIMAS and from other local universities, to become part of the teaching faculty of the program.

Quality management of the program is the responsibility of the Board of Studies, with the staff from the Centre for Applied Learning and Multimedia handling the administrative matters related to the study program, for instance, the daily operational management and payment to instructors who are involved in teaching the modules in the study program.

Program Offering

The program was offered to the first batch of participants in April 2003. It was conducted on an intensive basis for seven weeks to cover the first six modules. Classes were held everyday with 4 hours of lecture in the morning and 2 hours of supervised group work in the afternoon, in order to fulfill a minimum of 42 contact hours for each module. The last module, that is, Module 7 was conducted in the second semester during the normal class period for the course taught by each of the participants. They were supervised and evaluated on their teaching practice twice during the semester. The convocation ceremony for this first batch was held on 26 March 2004. In his speech at the ceremony, the Vice Chancellor stressed the importance of this program, that is to enhance the quality of teaching and learning at UNIMAS. He also hoped that through this program, the academics will be in a better position to support achieving the university's vision and mission.

Currently, there are 37 academics participating in the third offering of the program. They began classes in early April 2005, and now have completed 4 out of the 7 modules. It is expected that they will complete the program by March 2006.

Evaluation of the Program

After deploying the first round of

the program, it is imperative that the university investigates the effectiveness and perceived values of the program among the participants.

This section reports the findings of the evaluation that was conducted at the end of the sixth module of the program during its offering to the first cohort. The seventh module, Teaching Practice Module, is considered as a reinforcement module, in which the participants are expected to apply the knowledge and skills acquired from the first six taught modules to the practical teaching sessions.

The evaluation is aimed to provide an analysis of the outcome of the first offering of the post-graduate diploma program, in hopes that the findings will contribute toward the strengthening of the quality of the program in general.

Findings and Discussions of the Evaluation

The findings of the evaluation of the program based on the analysis of the responses from 22 respondents of the first cohort are described below.

Selected Demographic Characteristics of the Participants

Twenty-two participants responded by filling the evaluation questionnaire. Their average age is 28.7 years old, the youngest was 27 years old, and the oldest participant was 43 years old. The average teaching years at the university is 2.7 years for the group.

Table 1: Selected Demographic Characteristics of the Respondents

Age	Mean=28.7 years
Gender	64 % Male; 36 % Female
Overall teaching experience	<1-5 years
Teaching experience at UNIMAS	Mean=2.7 years

Relevancy of Learning Units in the Program

One question was asked to assess the relevancy of learning units structured in the Postgraduate Diploma in Teaching and Learning

program. The participants were asked to rate a list of learning units which were covered in the program. Their rating scale used the value "0" as "irrelevant", and value "1" as "relevant".

Data analysis on the relevancy of learning units and modules clearly depict that the highest ranked module is Module 5, which is the Assessment in Learning module (see Table 2). It is also interesting to note that the respondents unanimously agree that the learning unit on Methods of Assessment should be retained in the program. The standard deviation value for this item is 0.000, indicating that the respondents were in complete agreement that the learning unit must be retained in the program.

Another highly ranked module is **Module 3: Instructional Design**. The respondents gave a high score when rating this module, and when analyzing each learning unit, almost all learning units were ranked between 0.7 and 0.9, on the zero-to-one rating scale.

Other learning units which were deemed important are those concerning **Course Design, Instructional Objectives, Lesson Planning and Learning Activities, Selection of Delivery Methods and Strategies, Classroom Management, Characteristics of Good Assessments, Guidelines for Objective Assessments, and Infusing Technology in the Classroom**. These are the major concerns for the respondents, in terms of creating a learning context that is highly effective and well-managed, and at the same time, uses the innovations of technology in the classroom.

The lowest ranked module (and its learning units) is **Module 1 (Introduction to University Teaching)**, and the specific details of the respondents' concerns about this module have been aptly highlighted in the qualitative section of this study, below. The mean value for this module was only at 0.5, and only two topics in the module recorded mean values that were higher than 0.5 (**Teaching as a Profession & Personal Philosophy of Teaching**).

Suggestions for Improvement to the Program

In the qualitative section of the evaluation, participants were asked to give their comments and suggestions that could help to improve the quality of the program. The respondents were given open-ended questions which specifically asked them to write their comments about the program.

The feedback was categorized into seven major themes, namely, **Curriculum and Instruction, Program Management, Choice of Resource Persons and Expertise Levels, Workload Expected in the Program, Program Monitoring, valuation Process, and Scheduling Issues**.

Table 2: Mean Score by Learning Unit and Module.

Module 1	1.	UNIMAS Vision and Mission	0.5
	2.	Framework of Teaching-Learning Process	0.4
	3.	Concept of University Education	0.5
	4.	Understanding University Students	0.5
	5.	Commonly Held Assumptions About Teaching	0.4
	6.	Teaching as a Profession	0.6
	7.	Professional Characteristics of University Teachers	0.4
	8.	Competencies of University Teachers	0.5
	9.	Good Teaching Practices	0.4
	10.	Personal Philosophy of Teaching	0.6
Mean Score for this Module			0.5
Module 2	1.	Learning Theories	0.7
	2.	Principles of Learning	0.7
	3.	Learning Styles and Capabilities	0.8
	4.	Teaching Approaches and Strategies	0.9
Mean Score for this Module			0.8
Module 3	1.	Instructional Design Theories	0.8
	2.	Purpose and Process of ID	0.8
	3.	Systematic Analysis of Learning Needs	0.6
	4.	Course Design	0.9
	5.	Instructional Objectives	0.9
	6.	Developing Course Contents	0.8
	7.	Searching for Resources	0.6
	8.	Lesson Plan and Learning Activities	0.8
	9.	Selection of Delivery Methods and Strategies	0.9
	10.	Evaluation	0.9
Mean Score for this Module			0.8
Module 4	1.	Developing Course Portfolio/File	0.8
	2.	Supervising Students	0.8
	3.	Motivating Students	0.8
	4.	Classroom Management	0.9
	5.	Evaluation of Teaching	0.7
	6.	Making Choices about Changes	0.6
	7.	Implementing and Assessing Changes	0.6
Mean Score for this Module			0.8
Module 5	1.	Concept of Assessment	0.7
	2.	Characteristics of Good Assessments	0.9
	3.	Methods of Assessments	1.0
	4.	Reliability and Validity of Measurement	0.8
	5.	Providing Continuous Feedback	0.9

Module 5	6.	Constructing Appropriate Tools for Assessment	0.8
	7.	Guidelines for Objective Assessment	0.9
	8.	Guidelines for Subjective Assessment	0.8
	9.	Scoring Rubrics	0.8
	10.	Ethical Issues in Assessment	0.6
Mean Score for this Module			0.8
Module 6	1.	Concept of Instructional Technology	0.6
	2.	Types and Functions	0.7
	3.	Process of Instructional Technology	0.8
	4.	Infusing Technology in the Classroom	0.9
Mean Score for this Module			0.8

Curriculum and Instruction

Due to the scope of the program, the contents, resources and examples used by the instructors tended to overlap between one module with another. The participants voiced their concern regarding these overlaps that they noticed, and they advised that the redundancies should be omitted from the program.

"Avoid overlapping in materials."

"No overlapping! There is a clear line between revisiting/revision and content overlapping."

"Omit some units or reduce the duration of the session for Module 1. It is a repetition of 'Module 0' of which many of us had gone through. Nothing solid or substantial can be gain [sic] except for only a few units like framework of teaching & learning" good teaching practices, personal philosophy of teaching."

One of the comments highlighted the dissatisfaction of a participant about the first module. For reference, the "Module 0" item mentioned in this comment relates to orientation program that used to be offered to new academic recruits at the university, between the periods of 1994 and 1998. The program has ceased to exist in the past six years, due to many complex administrative decisions. Because some of the participants in the postgraduate Diploma program were hired as tutors during the periods when Module 0 was offered, they have gone through some degree of training in the aspects of University Teaching. This comment reflects the frustration about the first module in the program, which seemed to be repeating the scope of an orientation course they took years ago.

"No modules or units are made available for training staff on proper and effective communication using English. It cannot be assumed that all academic staff are [sic] competent or proficient in English usage."

This is an interesting comment about the non-inclusion of communication skills in English in the study program. The comment illustrates the need to acquire skills in communication using English, as it is an essential tool to execute instruction effectively in the classroom.

"Infuse instructional technology and design in all units. Use Gagne-Briggs' 9 events of instruction. Understand learner differences, learning styles, use different types of media. Talk not only about 'what' but also 'how'."

This is another remarkable comment about the quality of instruction of the program. This comment directly quoted a content which they learned in the sixth module of the program (Gagne and Brigg's Nine Events of Instruction). It is interesting that the respondent made a very decisive attempt to use what was taught, to evaluate the quality of the program that they are attending. This reflects a sharp insight into the instructional content and strategy used in the program.

Program Management

When asked about the overall program management of the Postgraduate Diploma program, one comment indicated that there is a need to relieve the participants from other academic duties, so that they can concentrate on the program at a better pace. Due to the intensity of content and rigorous scheduling of classes, the participants felt that it had added more workload on them, and that they could not concentrate fully on the program because they are also laden with other existing academic tasks.

"Grant study leave for participant or excuse from academic duty during the program [sic]."

"Make it (the program) shorter please."

"Please provide continuous feedback."

This is one of the most frequent comments received from the respondents. The nature of the scheduling of courses throughout the program has impeded the way feedback from the instructors was given to the participants. Because of the delay in feedback, the participants felt that their learning expectations were not fulfilled.

"Please involve those with PhDs first. Ones who are in the midst of going for their PhDs should be exempted and let them take this course when they are back from studies [sic]."

There were also voices of concern from respondents who felt that they could have enrolled in the program at a later date. The selection for enrolment for the first cohort is done based on a top-down decision from the Registrar's office, and participation into the program was mandatory and non-negotiable. Some respondents felt that they should have been given the option to decide on when to enroll into the program, instead of being forced to do it, when they had already planned to continue their studies at PhD levels.

"Be open/receptive about the comments/constructive feedback given here. Not defensive. This is after all a university that strives for excellence."

One respondent highlighted the issue about the managers of this study program on how they accept feedback about the quality of the program. There were instances in the program where respondents gave insights into their dissatisfactions about how the program was run, and some of the instances turned into classroom conflicts that disrupt the flow of instruction in the modules.

"Rewards - some form of reward should be given to participants."

Another comment mentioned the interest to have some form of reward to be given to the participants of the program, to motivate and sustain their interest in improving their skills in teaching.

Choice of Resource Persons and Expertise Levels

Some of the comments from the group mentioned names of instructors who taught them in the program. One of the instructors, as mentioned in the first quote in this category, Dr. Yoong Suan, is one of the veteran academics in the field of educational assessment. He taught Assessment in Learning, Module 5, and he brought his wide range of experience in assessment design to the class. His presence made a significant impact on the participants because handling assessments has always been a problem to academics at the university, specifically to those who never had any training in education. Since Dr Yoong Suan has been in the academia for more than thirty years, the participants developed a high degree of respect for the 'how and what' he taught them.

"Role model teachers like Dr Yoong Suan (from USM) was really an inspiration for me to aspire to be like him one day. It would be good to have someone like him in each of the module [sic]. He has covered a lot and shared experiences from his teaching and research [sic]. My point is, get lecturers who can really teach, who can inspire us [sic]."

"For some modules, local authorities from other institution should be engaged, for example, for unit 1 and 2 of Module 2 and units 2, 3, and 4 of Module 4."

The participants were also critical about the other instructors who taught them in the program. Their

apprehension about the expertise of some of the instructors was reflected in the second quote in this category. The idea to employ other resource persons to replace the existing teaching line-up indicated that the participants were serious about getting quality learning from the study program.

"Make sure instructors practice what they are teaching in class [sic]"

"Make sure the instructors are prepared!"

"Practice what is being preached."

"Be confident and knowledgeable about subject matter."

It is worthy to note that the respondents were perceptive about the persons who taught them in the program, and they were able to consciously use the knowledge and skills they learn from the program to evaluate the quality of instruction of the program.

The respondents also commented about the lack of teaching preparation done by some instructors, who obviously came to class without adequate groundwork. The insufficient preparations on the part of the instructors have raised concerns from the group about the seriousness of the university management about obligating them to complete the program.

"Make sure the lecturers are prepared before lecture."

Workload Expectations

In terms of workload distribution, the participants of the program were given at least three assignments for each module, and were also asked to sit for a final examination at the end of each module. This comment illustrates the overwhelmed feeling they experienced when undertaking the assignments given to them for each learning unit.

"Less assignments please!! One major assignment per module NOT per learning unit [sic]."

It is interesting that for one of the modules, one of the respondents actually expected more assignments (hands-on format) to be given to the group. This shows that the

the nature of content and scope of learning, in that they are able to make estimations about the type of tasks that they should be assigned to, while studying in the program.

"Module 6 needs more practicals [sic]."

Program Monitoring

The comments below reflect the group's concerns about how the entire program was handled by the program managers. They demanded for better decisions to be made about the implementation of the program, so that the participants will reap the maximum learning rewards from the program.

"Better organized - ample time for revision."

"More time to study to allow learning retention."

"Proper planning and implementation - no doubt that this (program) is a good idea."

"Quality assurance, part of it is to ensure that the objectives are not conflicting."

Evaluation Process

This category illustrates the group's concerns about the assessment of learning in the program. After attending the Assessment Module, their perceptiveness about the quality of assessment in the program was heightened, and they demanded for improvements in the way the assessments were conducted.

"Assessments should be more performance-based and not pen-pencil test."

"Exams, assignments, scores and feedback need to be communicated timely."

"Improve the assessment methods."

Scheduling Issues

The major concerns under this category depict the frustrations the respondents felt about the scheduling of the program. The rigid schedule disrupted many of their pre-planned academic and research activities, and most are disappointed about lengthy duration of the program as it has hindered them from focusing on their own classes.

"Inform the participants long before the course start [sic]."

"Let the dean/head of faculty inform the participant or discuss with them before sending their name [sic]."

"Shorten the period or duration to one month."

"Please do not do the modules in the on-going semester as this has jeopardized my teaching schedule. I suffered the most in this semester!"

General Rating of the Program

To find out the respondents' overall perception about the general success of the program, in terms of acquiring the knowledge and skills of teaching, a 10-point scale was used.

The findings as shown in Table 3 illustrate a generally positive consensus among the respondents about the success of the program. With the majority of the responses falling under the moderately high end of the "satisfactory" scale, it can be concluded that the participants of this first batch of the program were reasonably satisfied with the program. There were no extreme responses that indicated if any of them were extremely unsatisfied or exceptionally satisfied with the program.

Conclusions

UNIMAS like all other public institutions of higher learning in Malaysia has an array of short courses designed as part of its staff development program. To go beyond the norms, UNIMAS is putting an extra emphasis in ensuring quality university education by incorporating new approaches and utilizing state-of-the-art technologies in teaching and learning. This is in line with the government's requirements that all public universities in Malaysia must install quality assurance mechanism in their academic programs.

One of the proactive steps taken by UNIMAS is to offer a Post Graduate Diploma in Teaching and Learning—an internal staff development program specifically designed primarily for its newly hired academics and junior lecturers. The program is designed as a professional development program to continuously upgrade the knowledge and skills of the academics,

especially in the area of pedagogy and instructional technology, as an added value to their profession as university educators.

Table 3: Overall Rating of the Postgraduate Diploma in Teaching and Learning Program, based on a 10-point Rating Scale.

Rating	Percent
1 (Very Unsatisfactory)	0
2	0
3	4.5
4	9.1
5	9.1
6	0
7	36.4
8	36.4
9	4.5
10 (Very Satisfactory)	0

The evaluation that was conducted after the first offering of the Postgraduate Diploma in Teaching and Learning program at UNIMAS revealed many interesting insights into the technicalities of running a complex human resource development program in an academic setting. One of the finding illustrates how the participants upon completion of the study program, significantly shifted their perceptions about their knowledge of teaching skills. They were also able to provide constructive feedback about the quality of the curriculum and instruction of the program. And lastly, they were able to use the learning theories taught in the modules to substantiate their opinions about some aspects of the program.

At the time of this writing, the third cohort is midway through the program. The feedback accumulated from the first cohort has made an impact on the way the program has been managed in the second and third offering. It is hoped that similar training programs like this Postgraduate Diploma in Teaching and Learning will be created and offered by other local universities to help academics to continuously improve their teaching skills. Only serious efforts such as this will enable the academics in Malaysian universities to remain relevant, hence, achieving competency and efficiency in their teaching profession.

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Electroacoustic Music from a Malaysian Perspective



text • inspiration

Dr. Hasnizam Abdul Wahid | awnizam@faca.unimas.my

My involvement in electroacoustic music increased after my return from York University, England in 1996. I was exposed to electroacoustic music enormously between 1995 and 1996, including MediaMix concerts in Sir Jack Lyons concert hall, which marked my first discovery and appreciation of electroacoustic music.

When I began creating electroacoustic music about three years ago, I never imagined that it would lead me to one of the most fascinating experiences of my life.

My first venture into 'experimental music' was through the establishment of the state-of-the-art computer music and recording studio at the Faculty of Applied and Creative Arts, Universiti Malaysia Sarawak (UNIMAS) in 1997, established by myself, later coordinated by Hasnul J Saidon, and with some help from our visiting professors. The studio was the first Musical Instrument Digital Interface (MIDI) studio within the university compound. The tools were rather simple - Pro Tools, Sound Designer II, and a PC running the Composers' Desktop Project.

After my return from York University in 1996, I spent most of my time researching on electroacoustic composition, exploring what has been described by Landy (2000) as the undocumented world of sound transformation.

The terminology is often used loosely to refer to 'any process for

the electronic generation and/or manipulation of sound signals, including techniques of sound synthesis for the electronic or digital generation of a signal. If the purpose of such manipulation is artistic, the result is termed 'electroacoustic music'. (Truax, 1999). It was later used as an umbrella term as the practice of 'musique concrète', 'tape music', and electronic music.

Electroacoustic music as a whole can be described as the exploration and the manipulation of sound.

The history of electroacoustic music, from the western perspectives, can be traced as far back as, 1948, when Pierre Schaeffer, coined the term *musique concrète* after an experiment with recorded material on magnetic tape. The material was later subjected to various modifications, such as reverse, resonance, delay and so on. The genre turned into the medium of a tape recorder with several standard tape manipulation techniques developed and later became part of the repertoire of techniques for composing *musique concrète*.

Electroacoustic music could mean anything from 'electronic and computer music' to styles descending from *musique concrète* and early electronic music to all amplified and recorded music. *Musique concrète* from a historical perspectives can be described as anything 'derived from experiments with recorded sounds' (Apel, 1970).

Presenting electroacoustic music

In electroacoustic music, composition and concert presentation or 'diffusion' are regarded as two related process in bringing sounds together throughout the compositional process. Unlike typical or contemporary composition approach, this genre focuses more towards the notion of sound rather than musical notes.

In electroacoustic music, at the early stages, all sounds are subjected to various manipulation methods and later 'musically' organized. These 'sounds' are recorded, then processed, edited, mixed and structured in the studio, through the use of technology and requires 'new compositional strategy' away from the 'traditional' methods, together with critical listening conditions.

In presenting electroacoustic music, multi-channel delivery has its own history and references. The role of space in composers' intentions and compositional decisions in the studio and during later presentation to the public via diffusion play a critical role in the reception particularly in electroacoustic music. A good stereo piece performed through multiple pairs of stereo speakers could be damaged if the performer fails to diffuse the piece well. On the other hand, a bad piece can be improved if careful diffusion is able to catch the audience's interest during listening.

Sound diffusion can be referred to as one of the 'aesthetic compo-

nents' of an electroacoustic piece, according to Wyatt (2000), who emphasised that it will 'enhance the spatial components' of an electroacoustic piece. He further discussed that this performing practice, can be done electronically by 'delivering musical gestures, phrases, or single sounds to different locations'. The diffuser or a 'sound projectionist' in this context will have the function of 'delivering' or 'projecting' the sonic quality, and will make it as impressive as possible within a given space.

Compositional issues

In his discussion on composition and performance, Harrison (2000) proposes a model of composition in which an intimate relationship exists between composer and material. Just like the 'early principle of composing *musique concrète*' with analogue tape, composers will go through a process of technical and aesthetical exploration of the material, during which the composer's aural experience plays a crucial role.

Interestingly, the processing and composition stages in the creation of electroacoustic music are still predominantly within the studio domain, right up to the present. Most pieces are composed either in 'standard' stereo format for later diffusion in the concert environment, or in some 'absolute' multi-channel output (such as eight tracks), where 'normal' diffusion is not regarded as essential to enhance the characteristics of the material on the tape (Hasnizam Abdul Wahid, 2003).

Introducing the '6+2' technique

I engaged in an exploration of '6+2' mixing technique, after it was discussed by Jonty Harrison, David Berezan and myself during one of our tutorial sessions while experimenting with 'surround concepts' in Pro Tools version 5.1 in the University of Birmingham, Electroacoustic Studio 1 (BEAST). As a consequence, sounds were composed in space as we worked in the studio environment. These two 'absolute', yet complementary and related processes are different from a typical 8-channel set-up.

In '6+2', the outputs from tracks 1 and 2 of the 8-channel tape are usually treated as a 'normal' stereo pair for diffusion via the BEAST diffusion system.

Tracks 3-8 are assigned directly to six speakers positioned 'close in' to the audience as can be described through speaker 3,4,5,6,7 and 8 as shown in Diagram 1, below.

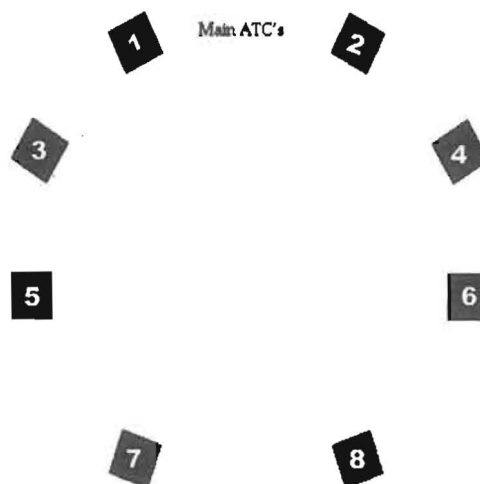


Diagram 1. The University of Birmingham's Studio 1 set-up for '6+2' mixing environment.

The 'main' ATC speaker outputs are the 'stereo output' in the studio environment but output from the two channels feeding these two speakers are diffused in the concert environment through the BEAST diffusion system. Meanwhile the rest (output of tracks 3, 4, 5, 6, 7 and 8), remain as 'fixed outputs' in both environments.

This offers greater flexibility than the standard 8-channel mix because the composer or the diffuser will have more 'options' for stereo diffusion while also having 'pre-diffused' or fixed material in space. The 'close-in-speakers' carry fixed diffusion patterns, depending on the texture of the material and on the aims of the individual composer. In the concert situation, the main stereo mix is diffused in real time.

Composing with space in a '6+2' studio environment

If we accept Harrison's notion of a partnership between composer and material in the evolution and gradual emergence of acousmatic music, it is clear that determination of the spatial characteristics of a work, as with all other compositional decisions in the studio, starts from the composer as the 'first listener.'

The '6+2' technique was presented in public for the first time during BEAST's *New Sound-New Art* event, in November 2001 at the CBSO Centre, Birmingham.

My exploration of the '6+2' technique, however, is not a complete solution to the question of finding 'the right way' to diffuse or to pre-diffuse certain texture in presenting electroacoustic music. It is more a step towards finding another option concerning how a piece can be performed in such a way that the audience may anticipate the composer's intention in a piece and to satisfy those original compositional aims, and, at the same time to give some options in terms of compositional approaches in electroacoustic music.

Electroacoustic music in Malaysia

Electroacoustic music is relatively new and is still something of an experiment in Malaysia. One of the main reasons is that the technology itself is not publicly available, expensive and looks complicated, at least from an average person's point of view. There is no specific reference point in terms of composers or electroacoustic works from Malaysia.

In general, it may be concluded that the state of event particularly concerning electroacoustic music in Malaysia is still behind the western world, due to various reasons and a significant progress should be made for future works in electroacoustic music to blossom and to be made accessible to people in this region.

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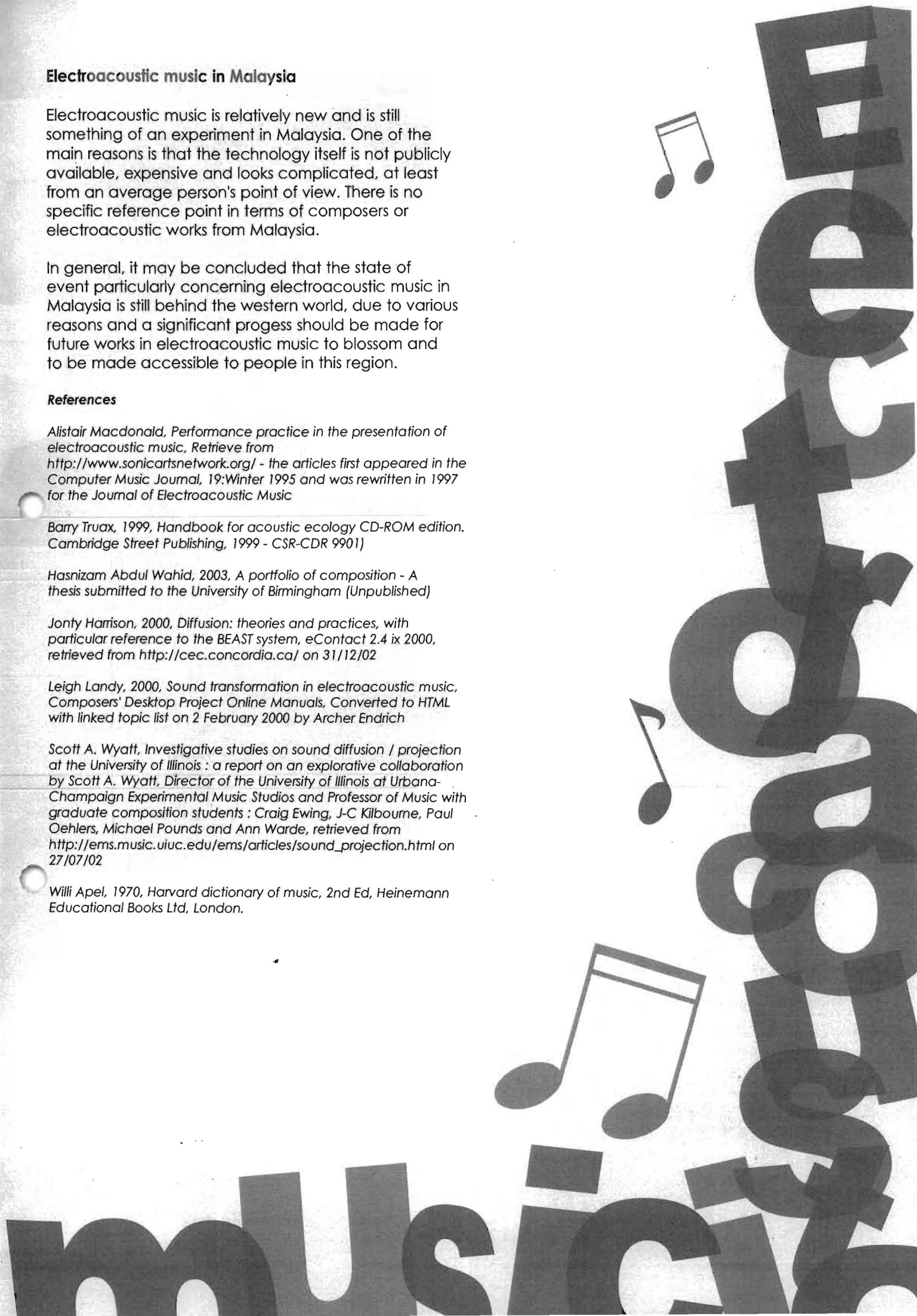
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//HAPPENINGS

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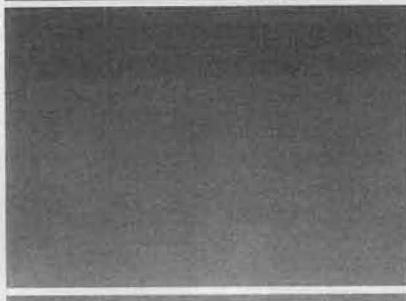
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Tender of
Electronic Academic
Performance Support
System between
Centre for Applied
Learning and Multimedia
(CALM), UNIMAS
and SAPURA Sdn Bhd
27 October 2005



▲ PGDTL's
Convocation

MAJLIS KONVOKESYEN KEDUA
PROGRAM DIPLOMA PASCASISWAJAH
(PENGAJARAN DAN PEMBELAJARAN)
DAN MAKAN MALAM
19 NOVEMBER 2005
UNIVERSITI TEKNOLOGI MARA

